TOWN OF DAVIE
TOWN COUNCIL AGENDA REPORT

TO: Mayor and Councilmembers

FROM/PHONE: Bruce Taylor/954-327-3741

PREPARED BY: Bruce Taylor

SUBJECT: Other -

AFFECTED DISTRICT: Townwide

ITEM REQUEST: **Schedule for Council Meeting**

TITLE OF AGENDA ITEM: Asbestos Pipe Remediation

REPORT IN BRIEF: This item is being placed on the Town Council Agenda at the request of Vice Mayor Starkey or discussion of the asbestos pipe on the Palma Nova Property that was recently purchased. We are attaching information relating to the history and use of asbestos pipe and cost estimates for asbestos pipe abatement

PREVIOUS ACTIONS: N/A

CONCURRENCES: N/A

FISCAL IMPACT: not applicable

Has request been budgeted? n/a

If yes, expected cost: $

Account name and number:

Additional Comments:

RECOMMENDATION(S): Other -

Attachment(s):

History and Use of Asbestos Cement Pipe

Asbestos Cement (AC) pipe is used in many countries around the world. This pipe has been used since the early 1900's. It has been used in the United States since the 1950's. One primary reason for the use of this type of pipe material is its resistance to corrosive soil conditions. However, there has been some concern about asbestos fibers which are carcinogenic only when inhaled, not ingested. Most utilities in Broward County over 20 years old have miles of asbestos cement pipe in both their water and wastewater transmission systems.

Asbestos Abatement Cost Estimates

In starting the estimate, a field meeting was conducted with a staff member of Ferncrest Utilities who was knowledgeable of the location and types of pipes used in the utility system. Certain sections of the system used asbestos cement pipe and are specifically used in the proposed project area. Pipe quantity was estimated, because no as-built drawings were available at the time of compiling an order of magnitude cost estimate, which has a range of accuracy as defined by the American Association of Cost Engineers as +50/-30% for a Class 4 Estimate. Dumpster fees and hauling are included in the linear foot pricing listed below in the Engineers Opinion of Probable Cost:

ITEM	DESCRIPTION	QUANTITY	UNIT	PRICE	AMOUNT
1	Existing 6" AC Water Main Removal and Disposal	500	LF	$25.00	$12,500.00
2	Existing 4" AC Force Main Removal and Disposal	516	LF	25.00	$12,900.00
3	Cap connections	1	EA	$1,000.00	$1,000.00
				TOTAL =	**$26,400.00**

Three local contractors were contacted to remove AC pipe and the current prices were verbally received. The three contractors had similar costs. Each agreed that removing AC pipe is similar to removing any other type of pipe as long as it is not cut or crushed. Considering the manner in which these pipes were constructed, and their age, we do not anticipate any cuts will be necessary and the pipes would be removed intact. Each of the contacted contractors acknowledged that they had the proper training and experience to remove this type of pipe material carefully without cutting or breaking. These procedures are not unusual and is practiced routinely. Waste Management operates a local landfill which accepts dumpsters of asbestos cement pipe for disposal.

In order to get a more precise estimate a survey of the pipe route and soft-dig methods of pipe exposure will be required. It is estimated these non-intrusive subsurface utility detection methods would cost approximately 15 percent of the cost of removal of the piping materials. An estimate of the investigation would be:

ITEM	DESCRIPTION	QUANTITY	UNIT	PRICE	AMOUNT
1	Ground Penetrating Radar	1	DAY	$1,200.00	$1,200.00
2	Vacuum Excavation	5	EA	$305.00	$1,525.00
3	Report and Survey	1	LS	$1,500.00	$1,500.00
				TOTAL =	**$4,225.00**

A second option was also investigated - Filling the pipe with cement (grout). This is a frequently used method for securing abandoned piping without removal, typically used where no further activity in the area is expected. This method is least costly in the beginning but in the future if the pipe needs to be removed additional weight due to the grout will impact the removal cost. An Engineers Opinion of Probable Cost is listed below:

ITEM	DESCRIPTION	QUANTITY	UNIT	PRICE	AMOUNT
1	Grout Existing 6" AC Water Main (Approx. 500 LF)	4	CY	$500.00	$2,000.00
2	Grout Existing 4" AC Force Main (Approx. 516 LF)	2	CY	$500.00	$1,000.00
3	Cap and fill connections	4	EA	$550.00	$2,200.00
				TOTAL =	**$5,200.00**

The opinions in this report were based on Florida Statute 469, Asbestos Abatement, which states the following in the Exemption:

> (4) Licensure as an asbestos consultant or contractor is not required for the repair, maintenance, removal, or disposal of asbestos-containing pipe or conduit, if:
> (a) The pipe or conduit is used for electrical, electronic, communications, sewer, or water service;
> (b) The pipe or conduit is not located in a building;
> (c) The pipe or conduit is made of Category I or Category II nonfriable material as defined in NESHAP; and
> (d) All such activities are performed according to all applicable regulations, including work practices and training, of the United States Occupational Safety and Health Administration under 29 C.F.R. part 1926.

In summary, the abatement of asbestos cement pipe can be done by the grouting of the existing line and is least costly but not recommended if future plans have pipes in the design. An investigation of how much asbestos cement pipe is to be removed is recommended and can be used to obtain more precise removal costs for bidding. The crushing or cutting of the pipe is not necessary if handled with care, avoiding classifying the material as hazardous. The use of a local underground contractor and disposal in a local landfill using proper precautions and training procedures is feasible and is the best option for the Town of Davie.